

WHAT IS CLAIMED IS:

1. A hot laminating apparatus having a transmission passage for passing therethrough a sheet material and thin films to be hot laminated, comprising:
 - a first transmitting and heating roller disposed at a first side of said transmission passage for heating a first one of said thin films in contact therewith and transmitting said sheet material with said thin films through said transmission passage; and
 - a first heat shield disposed adjacent to said first transmitting and heating roller, formed of material comprising a heat-reflective material and configured to reflect thermal energy dissipated from said first transmitting and heating roller back to said first transmitting and heating roller.
2. The hot laminating apparatus according to claim 1 wherein said first transmitting and heating roller further comprises:
 - a first heating shaft for rotating and providing thermal energy; and
 - a first roller element wrapping said first heating shaft and being heated with said thermal energy for heating said first one of said thin films, and driven by said first heating shaft to rotate so as to transmit said sheet material with said thin films through said transmission passage while pressing said sheet material against said thin films.
3. The hot laminating apparatus according to claim 2 wherein said first heating shaft is an electro-heater that transforms electric energy into said thermal energy.
4. The hot laminating apparatus according to claim 2 wherein said first roller element is made of rubber.
5. The hot laminating apparatus according to claim 1 wherein said first heat shield is disposed around said first transmitting and heating roller.

6. The hot laminating apparatus according to claim 1 wherein said first heat shield includes a heat-reflective layer made of said heat-reflective material on a first surface thereof facing said first transmitting and heating roller.
7. The hot laminating apparatus according to claim 6 wherein said heat-reflective material is nickel.
8. The hot laminating apparatus according to claim 6 wherein said first heat shield further includes a heat insulation layer made of a heat insulation material and arranged on a second surface thereof opposite to said first surface.
9. The hot laminating apparatus according to claim 8 wherein said heat insulation material is one of foam rubber and asbestos fiber.
10. The hot laminating apparatus according to claim 1 wherein said hot laminating apparatus further comprises:
 - a second transmitting and heating roller disposed at a second side of said transmission passage for heating a second one of said thin films in contact therewith and cooperating with said first transmitting and heating roller to transmit said sheet material with said thin films through said transmission passage; and
 - a second heat shield disposed adjacent to said second transmitting and heating roller, formed of material comprising a heat-reflective material and configured to reflect thermal energy dissipated from said second transmitting and heating roller back to said second transmitting and heating roller.
11. The hot laminating apparatus according to claim 10 wherein said second heat shield comprises:
 - a heat-reflective layer made of said heat-reflective material on a first surface thereof facing said second transmitting and heating roller; and

a heat insulation layer made of a heat insulation material and arranged on a second surface thereof opposite to said first surface.

12. A hot laminating apparatus having a transmission passage for passing therethrough a sheet material and a thin film to be hot laminated, comprising:

a transmitting and heating roller disposed at a side of said transmission passage for heating said thin film in contact therewith and transmitting said sheet material with said thin film through said transmission passage; and

a heat shield comprising:

a main body; and

a heat-reflective layer formed on said main body for reflecting thermal energy dissipated from said transmitting and heating roller back to said transmitting and heating roller.

13. The hot laminating apparatus according to claim 12 wherein said main body of said heat shield is made of iron.

14. The hot laminating apparatus according to claim 12 wherein said heat shield is disposed around said transmitting and heating roller.

15. The hot laminating apparatus according to claim 14 wherein said heat-reflective layer is a nickel layer on a first surface of said main body facing said transmitting and heating roller.

16. The hot laminating apparatus according to claim 15 wherein said heat shield further comprises a heat insulation layer made of one of foam rubber and asbestos fiber, and arranged on a second surface of said main body opposite to said first surface.

17. A hot laminating apparatus having a transmission passage for passing therethrough a sheet material and a thin film to be hot laminated, comprising:

a transmitting and heating roller disposed at a side of said transmission passage for heating said thin film in contact therewith and transmitting said sheet material with said thin film through said transmission passage; and

a heat shield comprising:

a main body; and

a heat insulation layer formed on said main body for preventing thermal energy dissipated from said transmitting and heating roller from escaping away from said transmitting and heating roller.

18. The hot laminating apparatus according to claim 17 wherein said main body is made of iron

19. The hot laminating apparatus according to claim 17 wherein said heat shield further comprises a heat-reflective layer formed on said main body for reflecting said dissipated thermal energy back to said transmitting and heating roller.

20. The hot laminating apparatus according to claim 19 wherein said heat insulation layer is one of a foam rubber layer and an asbestos layer, and said heat-reflective layer is a nickel layer.